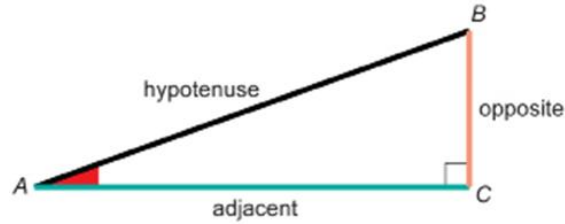


Trigonometric Patterns



$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

Draw a right triangle with an acute angle of 10° .		
$\sin \theta$	$\cos \theta$	$\tan \theta$
Draw a right triangle with an acute angle of 30° .		
$\sin \theta$	$\cos \theta$	$\tan \theta$
Draw a right triangle with an acute angle of 45° .		
$\sin \theta$	$\cos \theta$	$\tan \theta$
Draw a right triangle with an acute angle of 60° .		
$\sin \theta$	$\cos \theta$	$\tan \theta$
Draw a right triangle with an acute angle of 80° .		
$\sin \theta$	$\cos \theta$	$\tan \theta$

What Happens...

What happens to the sine calculation as you move from an angle of 10° to 80° ?

What happens to the cosine calculation as you move from an angle of 10° to 80° ?

What happens to the tangent calculation as you move from an angle of 10° to 80° ?

Predicting Trigonometric Values:

1. Locate the correct sine/cosine/tangent column of your table.
2. Move down the column until your needed angle is between the two correct table angles.
3. Use your table of trigonometric values to guess the trigonometric value.
4. THEN, draw and measure the triangle
5. Calculate the value to see how close your guess was.

Prediction: $\sin 35^\circ =$ _____

Prediction: $\sin 75^\circ =$ _____

Prediction: $\cos 15^\circ =$ _____

Prediction: $\cos 40^\circ =$ _____

Prediction: $\tan 55^\circ =$ _____

Prediction: $\tan 65^\circ =$ _____

Draw each one to confirm.